Chapter 4 – A Plan for the Rockville Pike Corridor

INTRODUCTION

This chapter is the core of *Rockville's Pike: Envision a Great Place.* It describes the policies for transforming the Rockville Pike corridor into an attractive, walkable area, enhancing its prosperity, and improving mobility, while acknowledging the distinct characteristics of different sectors of the Plan Area.

The vision for the Rockville Pike corridor emerged from the extensive public involvement process described in Appendix A, integrated with the findings of the transportation, land use, and economic analysis that are summarized in Chapter 2. The vision is to transform the Rockville Pike corridor from a utilitarian, aesthetically conventional retail strip into a special place featuring improved overall mobility, economic vibrancy, and a pleasant and greener environment. These themes were articulated as the Corridor Planning Principles, outlined in Chapter 3.

Chapter 4 is organized into the following sections:

Introduction
Principal Transportation Policies
Principal Land Use Policies

Even though the plan integrates transportation and land use policies of the plan, they have been separated in this chapter for the sake of clarity.

PRINCIPAL TRANSPORTATION POLICIES

This section describes the transportation policies for the Rockville Pike Plan Area which are designed to improve mobility, safety, and connectivity for automobile drivers, pedestrians, bicyclists and transit riders. Improvements to the infrastructure will increase the capacity for

every travel mode, while reducing conflicts. These improvements also serve the land use policies that are described later in this chapter by helping to create a vibrant, attractive, and pedestrian-friendly place. Strategies for implementing infrastructure improvements and transportation policies are discussed in Chapter 5, Implementation.

The principal transportation policies are as follow:

1. Re-design and reconstruct Rockville Pike as a multi-way boulevard
2. Expand the street network
3. Establish street classifications
4. Optimize access to and use of public transit

1. Re-design and Reconstruct Rockville Pike as a Multi-Way Boulevard.

Rockville Pike serves a dual transportation role in terms of mobility and access. It is part of a regional corridor through Montgomery County, as well as a local road for drivers trying to reach commercial land uses. A "multi-way" boulevard design will allow the Pike to serve both functions better.

What is a multi-way boulevard?

A multi-way boulevard is analogous to mixed-use development in that it is a "mixed-use" public way that attempts to balance the competing needs of roadway capacity, local access, transit, street parking, bicycle accommodation, and pedestrian comfort.

A multi-way boulevard can handle a large volume of relatively fast-moving through-traffic on central travel lanes as well as slower local traffic within the same corridor, but on separate yet adjacent and parallel roadways. Through traffic and local traffic are separated by attractively landscaped medians. The combination of medians, local access lanes flanked by on-street parking, bicycle paths, and wide sidewalks together create extended, comfortable pedestrian areas where movement is at a slow pace. Pedestrians are visually and physically removed from faster-moving through traffic and sidewalks become pleasant places to walk and socialize.

Multi-way boulevards have been a design choice for significant streets throughout the world, including the United States. The iconic boulevards of Paris and Barcelona; the Esplanada in Chico, California; and Ocean and Eastern Parkways in Brooklyn, New York are all examples that demonstrate their success. Today, they are making a comeback as communities work to lend character and a sense of place to undistinguished arterial roads – precisely the condition of Rockville Pike.

Figure 4.1: *Long recognized as the major high-end shopping street in Barcelona, the elegant Paseo de Gracia is a classic multi-way boulevard.*
Source: ACP Visioning + Planning

Figure 4.2: K Street, Washington, DC - *The section of K Street in the District of Columbia on the left (looking east from 16th Street) functions as a multi-way boulevard.*
Source: Wikimedia Commons Credit: AgnosticPreachersKid.

Rockville Pike as a Multi-Way Boulevard

The central main lanes of Rockville Pike and parallel side access roads together form the envisioned multi-way boulevard with a distance between building faces of approximately 252 feet (the boulevard cross-section is described in detail later in this chapter). This cross-section is possible because there are currently very few buildings on the land where the boulevard would be built. Building setbacks created in the 1970s, and refined by the 1989 plan, have been establishing the build-to-line at 135 feet from the centerline of the Pike. Since that time, at least 50% of any new building's façade on the Pike has been required to be located 135 feet from the road's centerline, with no portions of the buildings being closer to the center.

The setback area along the Pike (between the build-to line and the property line) is used today for parking and/or as a rudimentary access lane that functions much like a parking lot drive aisle. The 1989 Rockville Pike Plan called for the creation of access roads to separate through traffic from local traffic along Rockville Pike and, as the name implies, to provide access to private property. Informal access roads have been built sporadically in conjunction with redevelopment projects since that plan was adopted, but do not provide complete connections. The right (outer) lane of Rockville Pike continues to be punctuated by individual driveways for almost every parcel and a significant portion of local traffic is forced onto Rockville Pike even for short trips between nearby properties.

The multi-way boulevard recommended by *Rockville's Pike: Envision a Great Place* transforms this undefined swath of land from a confusing and relatively uncontrolled auto circulation arrangement into a much greater asset for all of the Pike's users, including pedestrians, bicyclists, bus riders, and motorists. It sets the build-to line closer to the Pike than did the 1989 plan, while ensuring a strong buffer between fast-moving traffic and pedestrians. It provides the framework for the vibrant place envisioned by the Rockville community during public meetings and through public testimony.

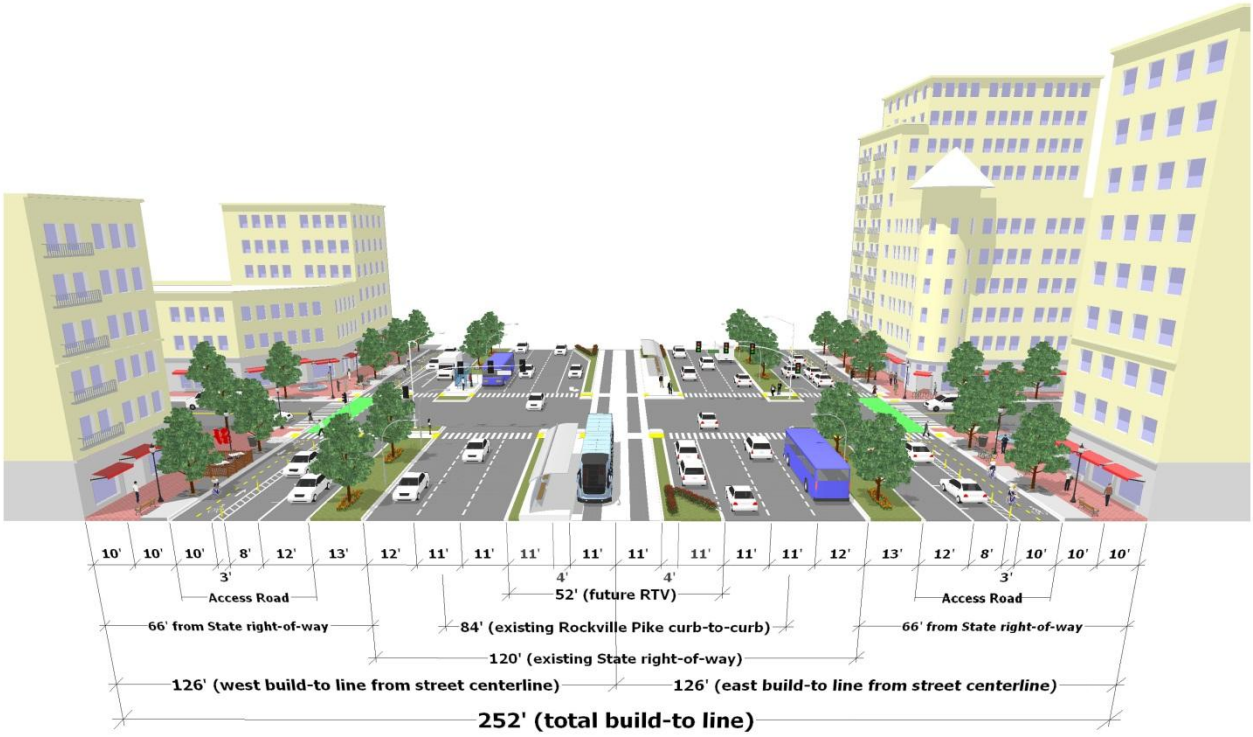
Figure 4.3 provides the vision for most of Rockville's portion of the Pike.

Primary Roadway

The key purpose of the main lanes of the proposed multi-way boulevard is to carry faster-moving and non-local auto traffic, as well as local buses. Features of the primary roadway are listed below:

- Approximately 52 feet of right-of-way width for a two–directional Rapid Transit Vehicle (RTV) line in the center of the Pike with medians on either side for RTV stations and automobile left turn lanes. Medians also provide refuge for pedestrians crossing the Pike. The 52 feet could be used as a wide median or for additional automobile lanes if the RTV line is not built, or until it is built.
- Three automobile travel lanes in each direction.
- The outer curb lane is wider (12 feet) than the other two (11-foot) lanes to accommodate local buses.
- Buses travel in the central roadway for efficiency and to facilitate speed.
- This infrastructure can all be built within the existing 120-foot State right-of-way.

Figure 4.3: Typical Multi-Way Boulevard Street Section



Ultimately, the State and the County will likely strongly influence decisions about the main lanes and RTV. The full boulevard design is included in this plan, however, for three reasons:

1. It is important for Rockville to articulate its desires because both the State and the County have indicated that Rockville's input will be considered;
2. Rockville must establish the overall framework and location for the access roads because they are likely to be a City-led project and could be built before the main lanes or the RTV line is built;
3. Rockville controls land use and, therefore, must set a defined build-to line for new development.

Access Roads

The access roads recommended by this plan provide access to private property. They are also intended to substantially reduce the number of curb cuts and driveways along the portion of the Pike designed for through traffic, thereby improving flow in those main lanes. Access roads can link multiple adjoining properties to enable a "park once and walk" environment. Their design is for slower speeds, reducing the vehicle conflicts among faster-moving vehicles, slower-moving vehicles, bicyclists and pedestrians that currently occur on the Pike.

The complexity of the activity that the access roads must accommodate actually contributes to their safety.[1] Drivers are forced to use greater caution and move slowly due to the volume and proximity of pedestrians, bicyclists, and other automobiles pulling into parking spaces or stopping to load or unload passengers. Street parking slows traffic, increases the number of pedestrians on the road, augments access to abutting buildings, and encourages street-oriented development. Pedestrians dominate and feel safe on the sidewalks, in the medians, and in the access road. Treed medians serve as a protective barrier from the central roadway.

Access roads help break down the scale of the formidable width of the boulevard by allowing pedestrians to cross in two or three stages, if necessary. Medians serve as buffers from moving traffic and provide a safe, pleasant waiting area for pedestrians who are crossing the Pike. Pedestrians may not have to wait for a traffic signal change to safely cross the access roads, due to their slow speeds, though they will have to wait for a signal to cross the main roadway. Trees between the primary and the access roadways help with the demarcation, provide an overhead canopy, and make the boulevard attractive.

<u>South Pike and west side of Middle/North Pike</u>

The full design of the boulevard access roads envisioned for Rockville Pike (Figure 4.3) can best be achieved in the South Pike and along the west side of the Pike through the Middle and North sections of the Plan Area. Here, the access roads provide:

- one lane of slow-moving local traffic, with the direction of travel corresponding to the adjacent travel lanes of the Rockville Pike mainline;
- one lane of parallel on-street parking;
- a two-way dedicated bike path with a buffer zone between it and parking;
- wide sidewalks that contain a clear walking area and an amenity zone; and,

[1]The Boulevard Book, Allan B. Jacobs, Elizabeth MacDonald, Yodan Rofe, 2002, MIT, Part 3, "Safety, Professional Standards, and the Importance of the Pedestrian Realm."

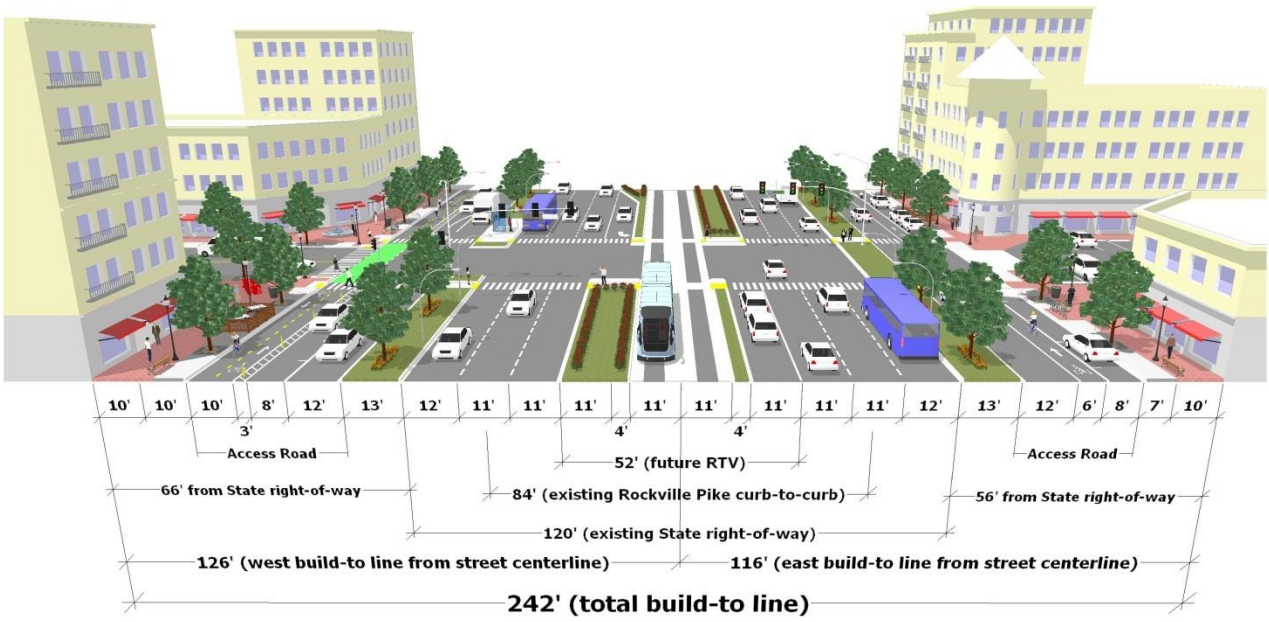
- landscaped dividers between the main lanes and the access roads that also accommodate bus stops for local bus traffic in the main boulevard lanes.

Middle/North Pike – east side

The access roads on the east side in the Middle and North Pike should be different because the land area between the Pike and the Metrorail/CSX right-of-way is narrow and because there are few opportunities for two-way circulation. Implementing the full boulevard design here would significantly reduce the developable land area.

The modified multi-way boulevard recommended for the narrower east side in the Middle and North Pike is shown in Figure 4.4, below:

Figure 4.4: Modified East Pike Multi-Way Boulevard Street Section



These modifications to the "typical" cross section save 10 feet that can be used by adjoining narrow properties as buildable area:

- The 10-foot, two-way bike path with 3-foot buffer zone is replaced with a 6-foot bicycle lane.
- The amenity zone of the sidewalk is reduced by 3 feet, from 10 feet to 7 feet.

Benefits of the multi-way boulevard approach

Besides increasing transportation efficiency and safety, one of the best reasons for converting the existing Pike arterial to a multi-way boulevard is to enrich the pedestrian experience. The access road is really where place-making begins because walking alongside the access roads, buffered

from the central roadway, is more like walking beside an urban neighborhood street than walking alongside a busy, high volume thoroughfare. Using this design, pedestrians will be at least 56 feet from the edge of the main thoroughfare in the South and West Pike sections, and at least 46 feet in the modified East Middle and East North sections. Today, sidewalks are immediately adjacent to the Pike, or separated only by a narrow strip of grass.

The multi-way boulevard approach will:

- *Allow for the separation of local and regional trips*. The separation improves the flow in the outer lane of the Rockville Pike mainline as vehicles no longer need to slow down to make right turns into individual driveways. The boulevard design offers a more controlled situation with limited ingress to and egress from the access roads and fewer curb cuts. The outer right lane, in particular, is safer and is kept flowing by reducing the number of driveway conflicts and turning movements.

- *Create the conditions for a shift in the transportation modal split along the Pike,* from heavy reliance on the private automobile to a range of transportation choices.

- *Make the Pike safer* by separating pedestrians and cyclists from faster-moving vehicles. The large number of curb cuts, long blocks, limited pedestrian connections, and lack of protected bike facilities, make today's Pike unsafe for motorists, bicyclists, and pedestrians alike, and make the corridor prone to accidents.

- *Integrate the Twinbrook Metro Station into the corridor and make transit a more attractive option* by increasing convenience for Metrorail and bus riders through improved sidewalks, protected crossings at intersections, an expanded street network, and the creation and improvement of pedestrian-friendly streets linking the station to the Pike. This is an important benefit because the Twinbrook station is one of the City's two major transit locations (the other being the Rockville Station, located just north of the study area) and provides direct access from the regional rail transit network to the South Pike area that has the greatest potential for redevelopment.

- *Anticipates and plans for additional high capacity transit* to operate along the boulevard, if the County implements its Rapid Transit Vehicle initiative.

- *Bring transit, walking, and bicycle users closer to the land uses of the Pike*, improve the experience of the road for non-motorized users, and expand bicycle access and safety through the multi-way boulevard's shared transit and bicycle lanes.

Figure 4.5 – Typical Access Road Section detail

- *Reinforce the role of the corridor as a significant commercial attraction in the region, while planning for increased numbers of residents*. Paralleling national trends, Washington D.C. consumers have shown increasing acceptance of and participation in pedestrian-oriented shopping/mixed-use environments in which significant numbers of residents and local workers walk or bike to retail clusters.

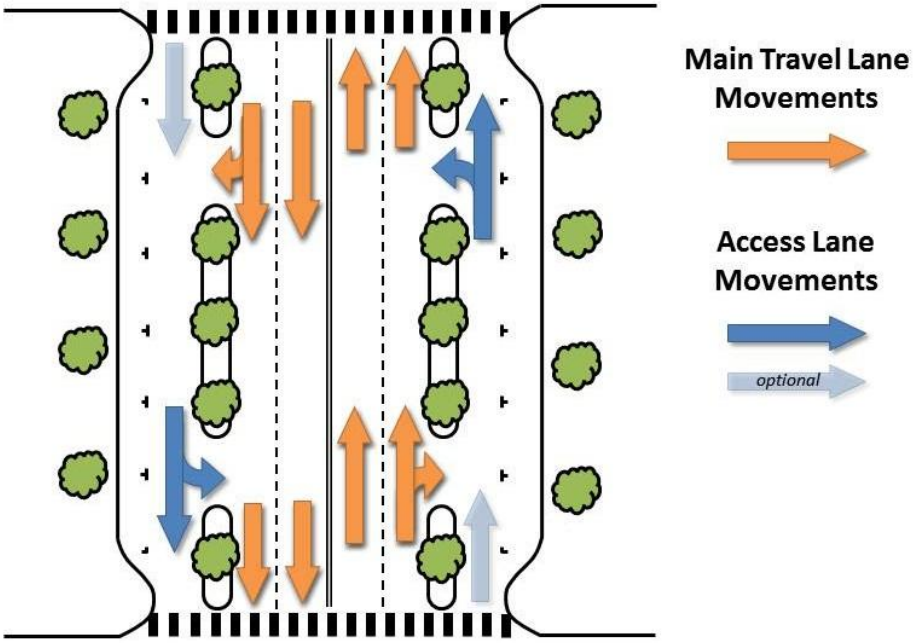
- *Facilitate the transformation of the corridor into an attractive place*. This is accomplished by the replacement of today's undistinguished appearance with tree-lined streets and sidewalks and the relocation of above-ground utility lines to below ground. It is also accomplished through development regulations that, over time, will shape redeveloped properties in ways that are consistent with the vision of the community as expressed in this plan.

- *Create a healthier community* in terms of a reduced carbon footprint, better air quality, and the promotion of more active lifestyles.

Access Points, median breaks, and intersection movements

Access points between the main roadway and the access roads are limited with the recommended boulevard design, resulting in a significant reduction in curb cuts along the thoroughfare's right lanes (see Table 4.1). Eliminating individual driveways for every property adds capacity and improves safety in the thoroughfare's right lanes, by reducing the "stop and start" experience that is common at present, and reducing encounters between through traffic and pedestrians. As shown in Figure 4.6, below, traffic from the main lanes would generally enter the access roads beyond a signalized intersection and merge back into the main lanes prior to the next signalized intersection.

Figure 4.6: Typical Access Lane Operation Concept



Unsignalized median breaks are eliminated, but traffic signals are added to two intersections (one in the Middle Pike and one in the North Pike, with definitive locations to be determined based on new street alignments and coordinated with Maryland State Highway Administration). The new signals will further improve intersection operations, allow for more vehicular movement choices, and provide additional locations for pedestrians to safely cross the Pike. They would be coordinated with existing signals to maintain traffic flow along the Pike.

Table 4.1 Comparison of Existing & Recommended Intersections & Access Points		
	Existing	Recommended
Signalized Intersections	8	10
Unsignalized Median Breaks	11	0
Pike Access Points/Curb Cuts	85	38

There are two recommended intersection traffic patterns that may be applied along the boulevard, identified below as Options 1 and 2. Each option has its own advantages for different circumstances. The choice for each intersection will be made at the engineering phase of plan implementation.

Figure 4.7: Intersection Option 1

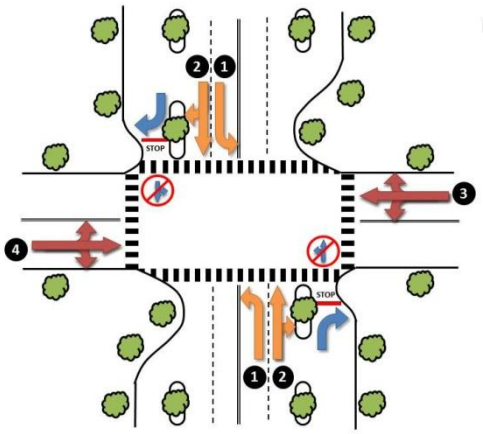
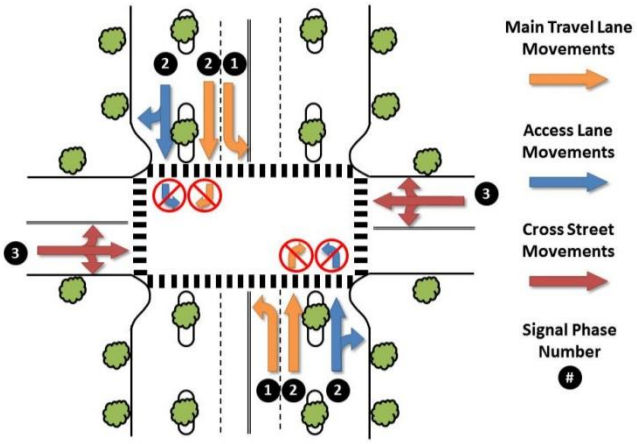


Figure 4.8: Intersection Option 2



Option 1: (Figure 4.7)

- All turns are permitted directly from the main line at signalized intersections.
- Right turns are allowed from the access lanes, after stopping and yielding to main line turning vehicles.
- Vehicles in the access lanes may not turn left or continue straight through the intersection.

Option 2: (Figure 4.8)

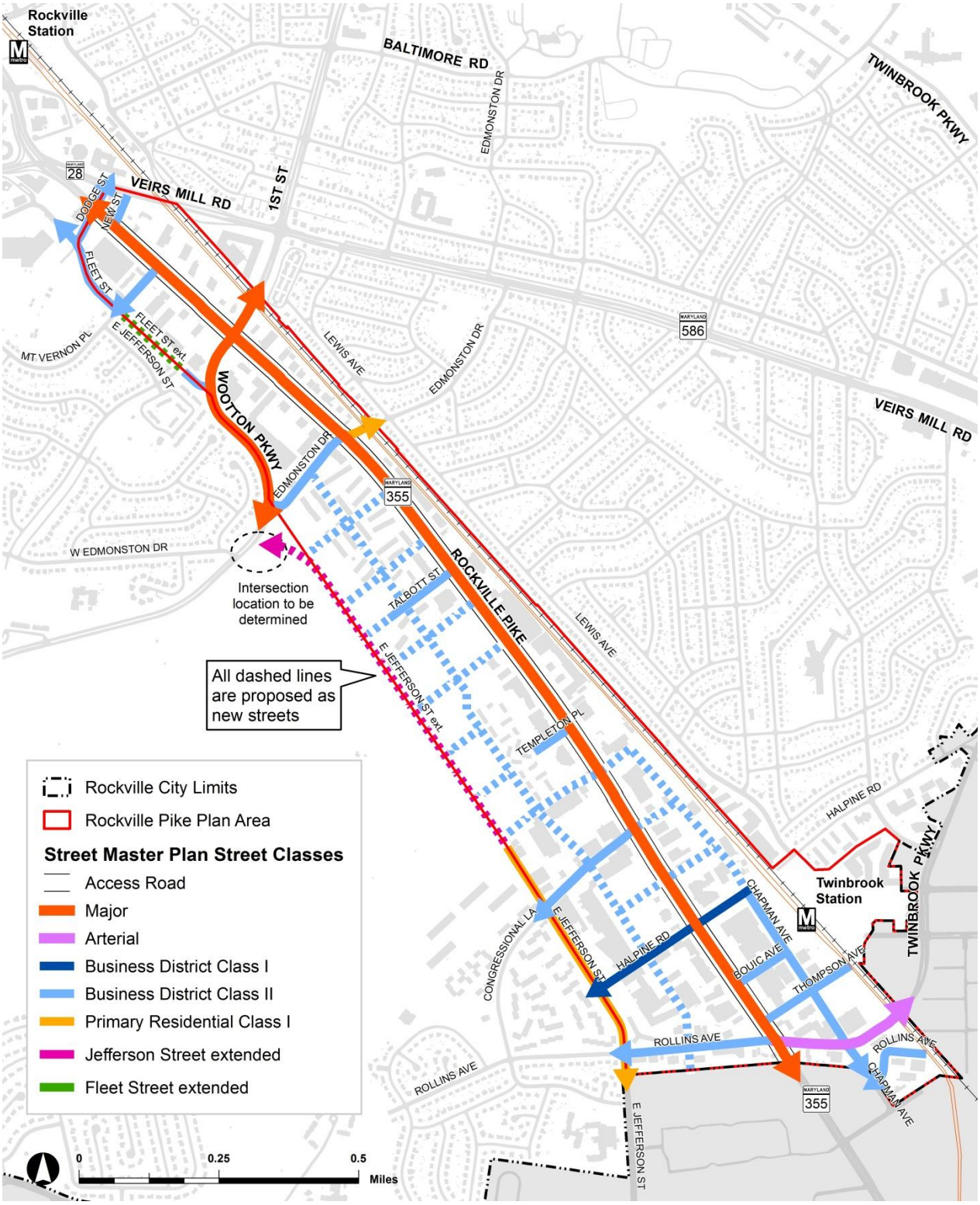
- Traffic on the access lanes is able to proceed through or turn right at an intersection under signal control, but not turn left.

- Right turns are not permitted directly from the main roadway to a side street.
- To access a side street from the main road, traffic would enter the access lanes prior to the intersection or stay on the main lanes to make a left turn.
- Traffic on the access lanes going through the intersection up to the next entrance from the main lanes would yield to the traffic entering the access lanes.
- Traffic can exit the access lanes at a designated exit point prior to the next signalized intersection.

2. Expand the Street Network

Expanding the street network will increase connectivity and movement choice within the plan area, diffuse traffic congestion, space intersections for more frequent and convenient pedestrian crossing opportunities, and create a regular pattern of developable urban blocks. The proposed alignments for new and extended streets are shown in Figure 4.9, the Street Master Plan. The Street Master Plan will require the placement of new streets as development occurs along the corridor, but the general locations and alignments shown are illustrative and could be changed based on specific development proposals and engineering data.

Figure 4.9: Street Master Plan

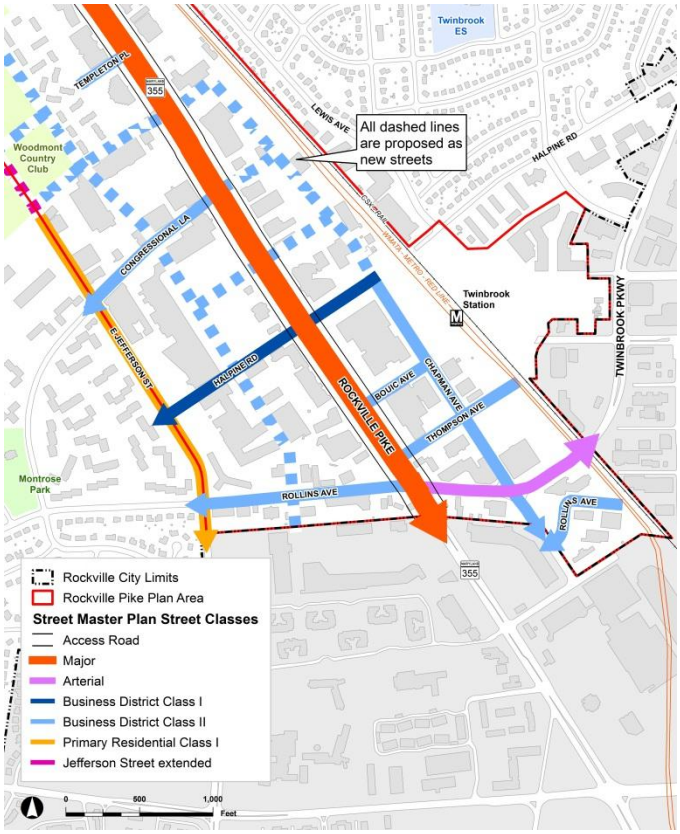


Recommendations for the expanded street network in the South, Middle, and North Pike are described below.

South Pike

The South Pike offers a good opportunity to expand the corridor's street network because of the existing large blocks. Major road recommendations for the South Pike are shown in Figure 4.10 and described below.

Figure 4.10: South Pike Street Master Plan



Chapman Avenue Extension

The key transportation element in the South Pike, on the east side, is extending Chapman Avenue north to one block beyond Congressional Lane (as shown also extended in Figure 4.10) and creating a grid connecting Rockville Pike and Chapman Avenue. This extension of Chapman Avenue will improve circulation and provide an alternative to using the Pike for local trips. The extension does not continue north through the entire corridor because of the dimensional constraints on properties on the east side of the Pike. Instead, it would end at a new east-west street that would cross the Pike and connect to East Jefferson Street.[2]

The alignment of the Chapman Avenue extension that was recommended in the 1989 Rockville Pike Plan only anticipated development on the west side of Chapman, but explicitly endorsed that the final alignment could be adjusted. The alignment for the first segment of this extension was adjusted in 2011 in the context of a development proposal. Through negotiations with other affected property owners, a revised alignment that allows development to occur on both sides of the road was conceived and approved. This level of flexibility is appropriate for the street network proposed in this plan.

[2] South of the City border, Chapman Avenue is a private street. A southward extension of it will likely be a transportation network discussion in the context of Montgomery County's White Flint 2 Sector Plan, which is underway now. *Rockville's Pike: Envision a Great Place* supports extension of this road to the south to improve connectivity.

Other street network

A north-south street is recommended west of the Pike, between the existing Jefferson Street and the Pike, which would continue through the Middle Pike to Edmonston Drive. Other streets would add connections between the east and west sides of the Pike and create smaller blocks. Congressional Lane is shown connecting Rockville Pike and Chapman Avenue extended, and a new street is proposed between Congressional Lane and Halpine Road.

Figure 4.10 is illustrative only. As elsewhere in the Plan Area, the recommended street alignments could be altered based on specific development proposals and engineering data.

The Middle Pike

This section of the corridor currently contains the fewest roadway connections, but it has the opportunity to add the most road network. This plan's approach to improving connectivity, given the unique conditions of the Middle Pike, are discussed below.

The East Jefferson Street Extension

The most important transportation element for the Middle Pike is the extension of East Jefferson Street from where it currently ends, just north of Congressional Lane, northward to Wootton Parkway (as shown in Figure 4.12). Because it would offer a parallel alternative to Rockville Pike, this extension would alleviate some of the congestion on the Pike, such as at its intersections with Congressional Lane and Twinbrook Parkway, both of which are highly congested at peak times. The East Jefferson Street extension should be considered in conjunction with any development or redevelopment project(s) that produce(s) a significant impact on these intersections.

The conceptual cross-section, shown in Figure 4.11, includes two travel lanes (one in each direction), bike lanes, on-street parking, tree lawns, a sidewalk on the east side, and a shared use path on the west side. These road components are consistent with the City's "Complete Streets Policy" that was adopted in July 2009. Complete streets provide facilities for all users, including pedestrians, bicyclists, transit users, and motorists, to the extent appropriate for the land use or the context of the street.

This cross-section assumes development only in the Rockville Pike plan area. Should the road be built in the context of a larger-scale development on the Woodmont Country Club site, it would be appropriate to re-evaluate the cross-section. In any case, the street should conform to the City's Complete Street Policy.

Figure 4.11: E. Jefferson Street Conceptual Street Section

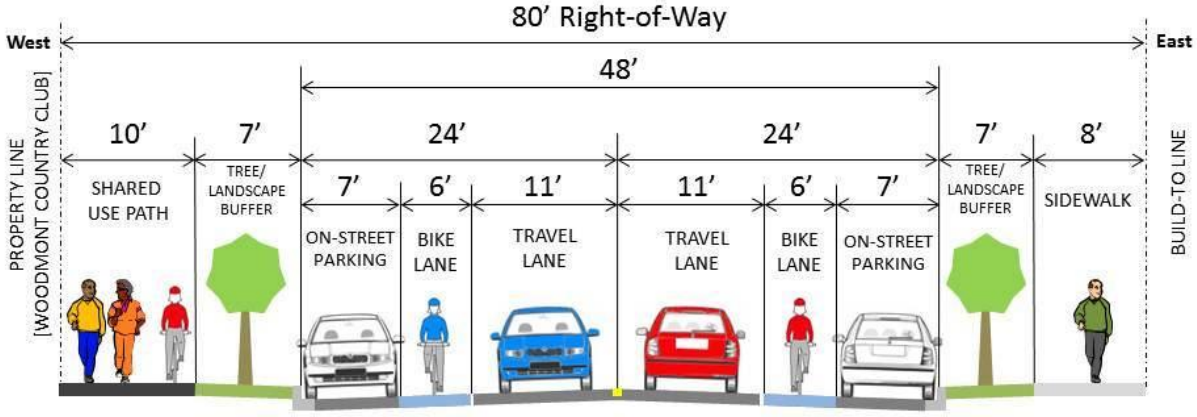


Figure 4.12: Middle Pike Street Master Plan

Incorporating these components into the design of the Jefferson Street extension would not only add multi-modal capacity, it would strengthen connections between existing bicycle and pedestrian infrastructure at the north and south ends of the Pike corridor. The Millennium Trail along Wootton Parkway and the Bethesda Trolley Trail are two of the key bicycle and pedestrian connections throughout central Montgomery County. While implementing the multi-way boulevard design for Rockville Pike is an important step in linking the Pike to these two facilities, a future extension of Jefferson Street should further accommodate cyclists and pedestrians in making the link.

The cross-section and alignment shown in this plan are for illustrative purposes only. The exact dimensions, operating characteristics, and alignment of the extension and its connection to Wootton Parkway will be determined based on conditions at the time of implementation, including development proposals and the area's geography. Under all circumstances, however, the alignment and road design should be sensitive to and protective of existing residences.

Added Street Grid between Rockville Pike and the Jefferson Street Extension

Figure 4.12 conceptually illustrates the recommended street additions in the Middle Pike. It shows a grid of approximately equally dimensioned blocks, roughly four acres in size. This is consistent with the land use section of this chapter which establishes that block faces be no longer than 500 feet in length without an alley, common drive, access easement, or pedestrian pathway providing through access. Blocks should also be no larger than four acres, or 1,600 feet in total perimeter.

This approach will help to achieve the goal of creating developable blocks in a more pedestrian environment. The grid respects existing property lines and buildings where feasible, but it is expected that this network would be built only in conjunction with owners redeveloping their properties, in which case current building locations may be irrelevant.

The Middle Pike street grid follows the north and south property lines of the Woodmont Country Club entrance fronting Rockville Pike, which would allow that property to be developed intact as a single project without crossing property lines or being bisected by a street. It also aligns a north-south street between the Pike and the East Jefferson Street extension at the rear of the Woodmont Overlook townhouse complex, as this residential area is not expected to be redeveloped during the timeframe of this plan.

New roads are required; however, the alignments of all of these streets, as with the Fleet Street and Jefferson Street extensions, are flexible and may be adjusted based on actual development programs. Sensitivity to existing residences and businesses will always be an important consideration in determining the final alignments. Compliance with the City's regulations on road dimensions, which can be found in Chapter 21 of the City Code, is also important. This plan is being completed in conjunction with an effort to update this portion of the Code, to result in consistency between the two. This is discussed further under the section "Establish Street Classifications," that follows.

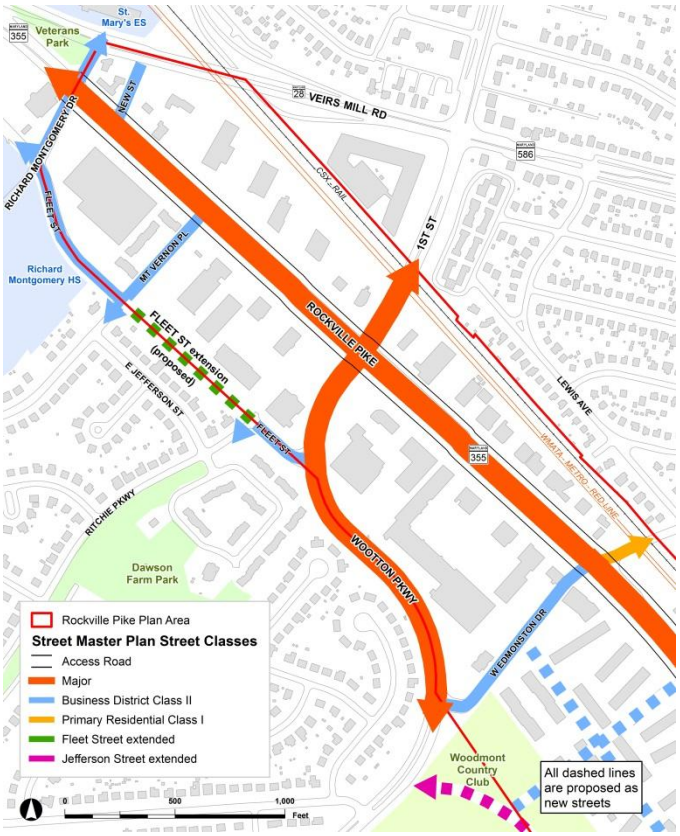
Middle Pike - East Side

There are no recommendations for added street grid on the east side of the Middle Pike because of the narrowness of this portion of the Plan Area. New signalized intersections and added street grid on the west side, as previously discussed, and a formalized access road on the east side will help to provide some circulation choices.

The North Pike

Fleet Street Extension

Figure 4.13: North Pike Street Master Plan

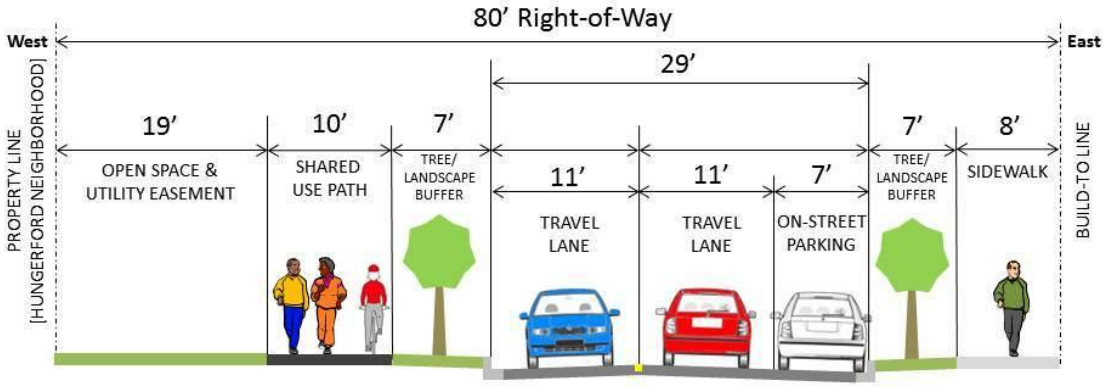


The primary street addition in the North Pike is the extension of Fleet Street to connect Wootton Parkway and Mt. Vernon Place and to provide a circulation alternative to Rockville Pike, as shown in Figure 4.13. This extension was previously recommended in the 1989 Rockville Pike Plan, as a four-lane business district road, and in the 2002 Comprehensive Master Plan.

This short connection will provide an alternative to the currrent approach used to avoid the frequently congested Wootton Parkway-Rockville Pike intersection – that cuts through the Hungerford neighborhood on Ritchie Parkway, East Jefferson Street, and Mt. Vernon Place. It also would offer some relief to the intersection of Wootton Parkway and Rockville Pike by providing a non-neighborhood alternative to accessing Richard Montgomery High School, City Hall, and County buildings in the Town Center area. The 80-foot right-of-way for the proposed alignment is already dedicated to public use as an improved shared-use path and accommodates underground water and sewer lines.

This plan recognizes that there is concern about safety if this road extension is built, particularly for students at the high school. In response, this plan recommends that the Fleet Street extension be reduced from previous recommendations for a four-lane road to a two-lane road (one lane in each direction), with street parking and a sidewalk on the east side, a path for walking and biking on the west (Hungerford neighborhood) side, and tree lawn on both sides. The design for, and operation of, this extension must encourage vehicles to travel at safe speeds by using traffic calming measures to maintain safety for pedestrians. A possible cross-section design, which also takes into consideration the locations of existing water and sewer lines, is shown in Figure 4.14; however, further input from the community should be sought before a final design is determined.

Figure 4.14: Fleet Street Conceptual Street Section



It is not anticipated that the Fleet Street extension will be a high volume or high speed road. The need for mitigation for abutting residential properties, therefore, is not considered to be acute, relative to many other residential areas in Rockville that abut heavily used or high-speed roads. However, ensuring a sufficiently protective buffer, preferably green, (such as trees or a berm as opposed to a constructed barrier or wall) for the Hungerford neighborhood houses that back up to the extension right-of-way will also be an important consideration of the road design.

East-west streets

East-west streets would be added in the North Pike if the owners of the shopping center (currently called the Ritchie Center) and auto dealership, which are located immediately east of the proposed Fleet Street extension, intend to redevelop. These streets could provide access to new development from Rockville Pike or Fleet Street and would help to break down block sizes, which is an important land use goal, as discussed later in the land use section of this chapter.

3. Establish Street Classifications

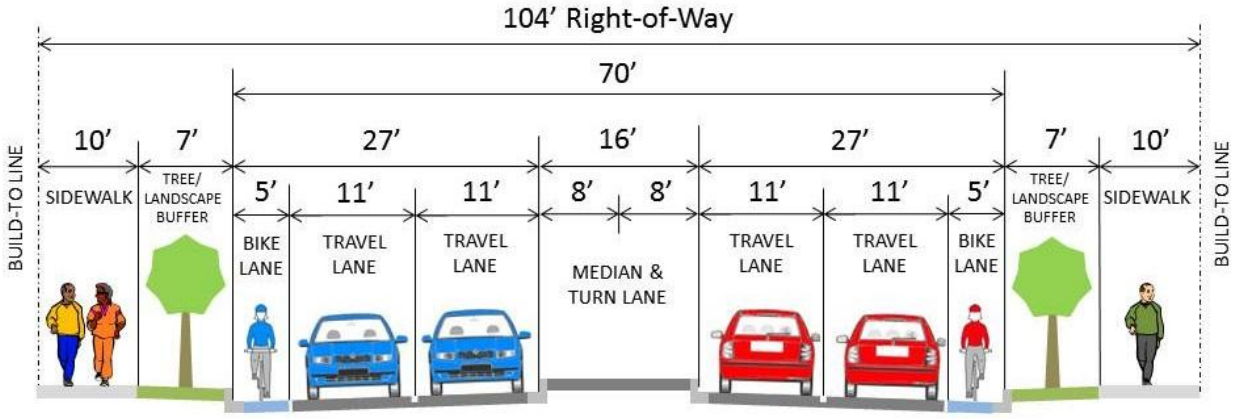
The boulevard features of Rockville Pike have been described above. The Street Master Plan (Figures 4.15 and 4.16) shows other street types within the Plan Area, specifically Business District Class I and Business District Class II streets. These streets conform to the City's Complete Streets Policy in that they include features that create a multi-modal-friendly environment that accommodates all road users to the extent appropriate for the land use or the context of the street. The Business District Class I and II streets described here will be designed in accordance with Chapter 21 of the Rockville City Code, but their general characteristics are described below. Their wider sidewalks, landscape/tree buffers, and bicycle accommodations all contribute to the land use policies of this plan.

Halpine Road – Business District Class I Street

A Business District Class I street consists of two or more lanes in each direction and may be divided by a median. Halpine Road is identified as the only Business District Class I street in the Plan Area. It is an important road in that it provides a connection across Rockville Pike to the Twinbrook Metro Station. Halpine's current road design and width changes from the west side of

the Pike to the east side: it is a multi-lane road that is divided by a median west of the Pike, but not east of the Pike; and it has on-street parking only east of the Pike. Halpine will likely continue in its current configuration in the near term, as existing buildings prevent any significant changes. Extensive redevelopment, however, would prompt the City to implement the full Business District Class I street design shown in Figure 4.15. Additional right-of-way would need to be obtained. As recommended in this plan, the Halpine Business District Class I street would be a multi-lane, divided roadway with dedicated bike lanes, wide sidewalks and landscaped buffers between the bike lane and the sidewalk. On-street parking also could be included if needed.

Figure 4.15: Business District Class I Street Cross Section



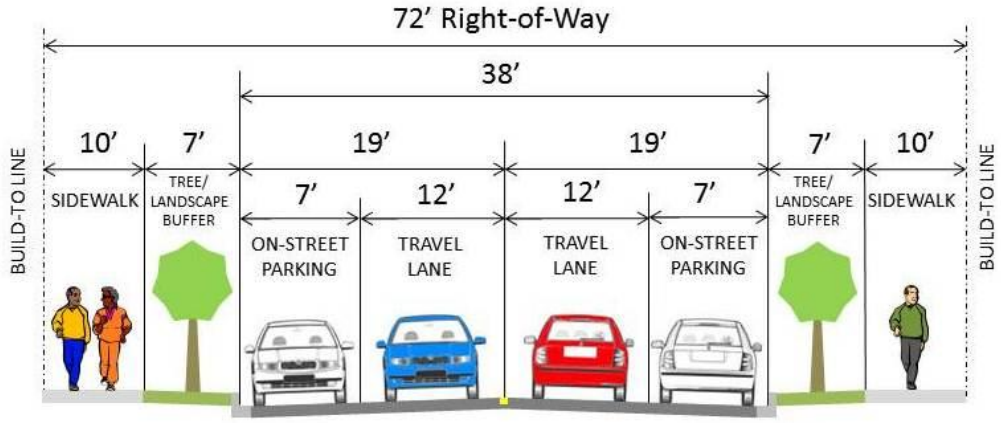
Business District Class II Streets

A Business District Class II street consists of one lane in each direction and is not separated by a median. Most of the streets within the Plan Area, both existing and proposed, are identified in the Street Master Plan as Business District Class II streets. These streets are undivided roadways with one travel lane in each direction, as well as on-street parking, sidewalks and buffer areas between the sidewalk and parking lane. Bicycle facilities (such as bike lanes or shared use paths defined with sharrow[3] symbols) may also be included on Business District Class II streets, as directed by the City's Bikeway Master Plan.

This plan establishes that the City take advantage of opportunities to upgrade all Business District Class II streets to the standards provided by this plan.

[3] Sharrow symbols are pavement markings that indicate that bicyclists may share the lane.

Figure 4.16: Business District Class II Street Cross Section



Other Streets

Other roads in the Plan Area include residential (East Jefferson Street) and existing arterials (First Street and Wootton Parkway, west of Rockville Pike).

4. Optimize Access to and use of Public Transit

The Rockville Pike corridor is currently served by a combination of transit routes and modes. Ride On buses provide local and county-oriented service, while Metro bus and rail serve the larger metropolitan area. The provision of safe, reliable, and convenient transit is critical to providing a more robust suite of travel options in the corridor, which will also reduce pressure on automobile infrastructure.

Metrorail

The proximity to the Metro Red line and the location of the Twinbrook Metro station are significant assets in this corridor, whose value will only increase over time. However, capacity issues must be addressed because new development and modal shift will put added pressure on the system. Planning initiatives to the north and south of Rockville also assume increased transit use and the same modal shift goals. This plan advocates for the full utilization of Metro's Red Line in terms of extending all northbound service to the Shady Grove station, providing minimum safe headways, and maximizing the number of cars on trains as needed to accommodate the anticipated increase in use within and outside of Rockville. The Twinbrook Metro station should be integrated into the corridor by providing good pedestrian and bicycle access and adequate bicycle storage.

Other Rapid Transit

The currently proposed countywide Rapid Transit Vehicle (RTV) system, and the proposed Rockville Pike RTV route in particular, have the potential to yield an enormous impact on the corridor and the share of travel accommodated by transit. The City should continue to participate

actively in discussions regarding any RTV system. If such a system is to be implemented, Rockville should solicit support for an RTV stop in the Middle Pike because that section of the Plan Area is least accessible to Metrorail.

Local Buses

Rockville should participate fully in any discussions of re-routing local bus service in the context of adding a new transit service. It will be particularly important, as the City moves toward a more multi-modal environment, to ensure that local service is not only retained, but improved, for people within the corridor as well as those using it to access the corridor from other neighborhoods. If RTV plays a regional role, Rockville will need to ensure that it does not displace local service and that the local bus service continues to serve everyone, particularly those who are not within walking distance of the RTV or Metro.

PRINCIPAL LAND USE POLICIES

This section describes the land use vision for the Rockville Pike Plan Area, provides guidance for its implementation and direction for future revisions to regulatory documents. The vision is for a livable, desirable, and economically vital environment defined by thoughtful urban design, multi-modal transportation, and active public spaces.

During the planning process for *Rockville's Pike: Envision a Great Place*, the concept of transforming the Plan Area into a more appealing environment for walking generated the strongest and most consistent support from public participants. Making the corridor walkable renders stores and other destinations more accessible to everyone - bus riders, drivers, pedestrians, bicyclists, and transit users - because walking becomes at least a part of every trip, even if it is just from the bus stop to one's apartment or from a car to one or more destinations.

The transportation improvements recommended earlier in this chapter will help to improve the safety of pedestrian and bicycle experiences by separating travel modes and creating a more finely developed street network. These improvements need to be supported by intentional design that will also help to make walking and biking pleasant, create a distinctive corridor and new urban neighborhoods. This plan's land use recommendations are in service of this goal.

While enhancing the pedestrian environment is an important goal, this plan acknowledges that the character of the Rockville Pike corridor is not, and should not be, the same for the entire two miles. Different parts of the corridor contain their own set of unique characteristics, land use and economic conditions, and related challenges and opportunities. These factors have an impact on how the plan addresses land use solutions and how future growth may be accommodated.

The east side of the Pike, in the North and Middle sections of the plan area, presents specific challenges. This area, due to its narrow geographic configuration, wedged between the railroad tracks and the Pike, has limited potential to achieve some of the objectives that are desired for the South and West Pike, such as multi-story buildings with a mix of uses and a highly pedestrian environment. The economics of development could change here, however, if an RTV line is built

along the Pike or if the west side of the North and Middle Pike becomes activated through redevelopment.

Principal land use policies of this plan include the following:

1. Seek to ensure a comfortable relationship between public infrastructure and the private built environment
2. Require buildings to be adjacent to sidewalks
3. Regulate building height by location
4. Create smaller blocks
5. Provide wide, pleasant sidewalks
6. Enhance the pedestrian environment overall and especially at strategic intersections and on strategic streets
7. Allow for and support a mix of uses
8. Encourage enduring architecture that has visual interest
9. Provide parks and public open space
10. De-emphasize parking

1. Seek to ensure a comfortable relationship between public infrastructure and the private built environment.

This plan addresses the relationship between building facades and public infrastructure, the form and mass of buildings in relation to one another, the public spaces formed by the disposition of buildings, and the scale and types of streets and blocks. This physical form approach emphasizes the built environment and the public realm's character with the goal of producing inviting public spaces. At the same time, it allows flexibility for the uses and activities that occur behind the building facade. The emphasis on form and scale means that a variety of uses can be allowed and mixed, as long as they conform to specified physical requirements.

The land use plan provided in Figure 4.17 divides that Plan Area into five land use designations: Core, Corridor, Center, General, and Neighborhood. These designations provide guidance for building standards and other development regulations that are provided in the Rockville Pike District Code.

Some areas will support a very active pedestrian environment, made possible by easy access to multiple transportation modes and a mix of uses. Most of the South Pike, east of Rockville Pike, is identified in the land use plan as the **"Core"** area. The Core is where the highest density should be encouraged, by 1) allowing the tallest building heights in the Plan Area, 2) requiring that the majority of building facades be located at the sidewalk, and 3) not permitting the construction of single-story buildings, other than accessory buildings.

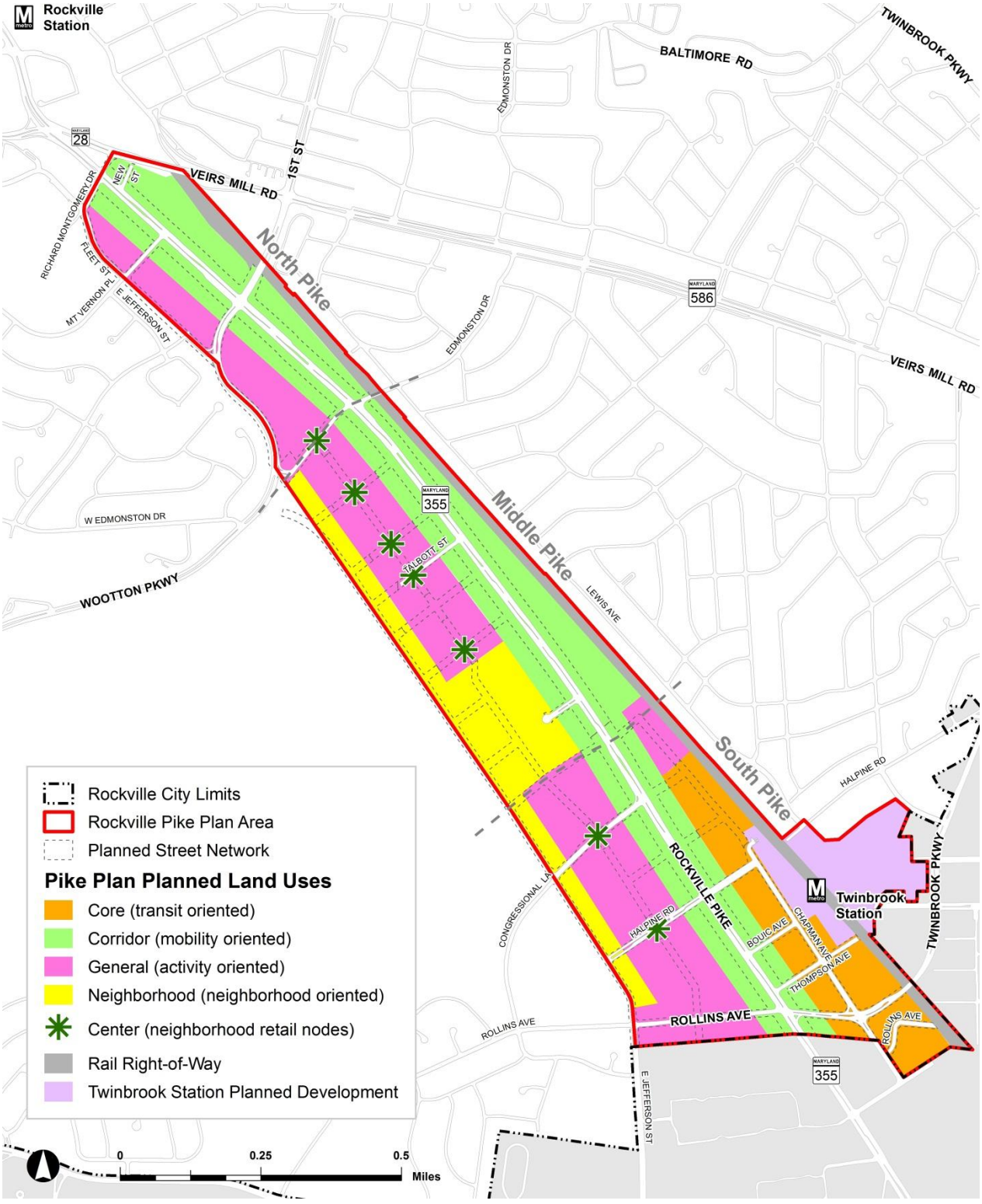
The land use plan identifies all of Rockville Pike as the **"Corridor"**. However, building placement, height, and form standards should be refined to reflect the different characteristics of the South, Middle, and North Pike and the east and west sides. Maximum building heights should allow for a coherent look along the length of the boulevard, except that greater height may be allowed on the east side of the South Pike given its proximity to the Twinbrook Metro station, and

lower heights should be mandated on the east side of the Middle and North Pike where parcels are located proximate to existing Twinbrook houses on Lewis Avenue. As in the Core, the majority of any building façade in the Corridor should be located at the sidewalk.

A **"Center"** designation is appropriate for locations where a similar, but less intense, development character to the Core and Corridor is desirable. These nodes, located west of the Pike, support an active pedestrian environment and a mix of uses, including retail, that primarily serve the surrounding neighborhood, but maximum building heights are lower than in the Core and the Corridor.

Other areas, **"General"** and **"Neighborhood**,**"** are more conducive to serving residential uses of varying scales, styles, and densities, with some inclusion of business services. Maximum building heights are the lowest in the Neighborhood areas.

Figure 4.17: Land Use Plan



2. Require buildings to be adjacent to sidewalks

This plan establishes that buildings will be constructed adjacent to public sidewalks, to frame the public realm, structure the environment for pedestrians, and position pedestrians where land uses are located (in contrast to the 1989 *Rockville Pike Corridor Neighborhood Plan* where sidewalks were separated from land uses). Building facades create an edge that helps to define public and private space, minimize ambiguous spaces, and establish an appealing place.

A continuous, yet varied, edge can be achieved by establishing a "build-to" line at the sidewalk on all streets within the Plan Area, and then requiring a certain percentage of building façade to be placed at that build-to line. While 100% of all facades of all buildings may be placed right at the build-to line, the percentage that is required to be at the build-to line should vary throughout the Plan Area, depending on the volume of pedestrian activity expected and desired.

Providing a clear delineation of public versus private spaces with a build-to line reduces the number of areas that are not obviously public or clearly private. Examples of such spaces are sprawling parking lots. People are often uncomfortable in these spaces, particularly when other people are not around; and they are always difficult places to walk.

All street-fronting building facades should be allowed to step back a small amount from the build-to line to allow for bay windows and other façade articulation on buildings, planters, stoops, stairs, etc. without encroachment into the public realm.

The lowest floors of a building are most important to providing street level activity as well as a sense of enclosure and human scale. For these reasons, the minimum percentage of building required at the build-to line should be applied only to the first two floors. Developers are given flexibility as to how they will achieve this goal. For example, if 70% of the building is required to be at the build-to line, 100% of the ground floor could be placed at the build-to line and only 40% would be required at the second story level, or vice versa. Other permutations would be allowed, as long as the average percentage required for a particular land use area is achieved by the first two floors.

The highest proportion of building façade at the build-to line is recommended for buildings that face Rockville Pike and streets that are closest to the Twinbrook Metro Station where pedestrian activity, and associated retail uses, is anticipated to be high. It is important for these buildings to frame the street and provide a sense of spatial enclosure, much like the walls of an outdoor room.

Lower proportions of building façade at the build-to line should be required where pedestrian activity is expected to be less, such as areas with the Neighborhood land use designation. A more flexible requirement in these areas allows for residential driveways and small front yards and will allow more "private" uses to be set back from the street.

In all cases, any lot section along a build-to line that is not defined by a building should be defined by a wall, vegetation, or some other delineation to continue the clear edge to the street-space where the buildings do not do so. A change in paving material or color may serve this purpose when a commercial or residential driveway meets a sidewalk.

The build-to line is zero feet from the back of sidewalk for all streets within the Plan Area. This includes the eastern side of the existing portion of East Jefferson Street, when it redevelops, though it is currently identified as a Primary Residential Class I street in the City's Road Code. Properties adjoining the west side of the existing East Jefferson Street segment are located outside of the Plan Area and their setbacks would not be determined by this Plan. For properties on the Pike, the build-to line is either 116 or 126 feet from the Pike centerline, depending on the location on the Pike[4].

No side or rear setback is required anywhere in the Plan Area, but if a side or rear setback is provided, there should be a minimum setback established to allow access for maintenance, etc.

3. Regulate building height by location

Maximum Building Heights

Maximum building heights recommended in this plan serve walkability and economic development objectives by permitting sufficient mixed-use density to create vitality, while responding to community concerns about over-development and maintaining a human-scale environment. This plan recommends that buildings fronting Rockville Pike have variable, but generally mid-rise, heights up to eight stories to frame the wide boulevard and provide an opportunity for a vertical and horizontal mix of uses.

Different height standards are appropriate for different parts of the Plan Area. The tallest buildings should be allowed in the proximity of the Twinbrook Metro Station where strong potential exists for creating the type and intensity of uses that serve and promote transit, including residential, retail, and office uses. While these potentially would be the tallest buildings in the Plan Area, they still would be considerably lower than those allowed in the White Flint area, to Rockville's south, where building heights up to 300 feet are currently permitted. Community input to the planning process, and current and foreseeable market conditions, indicate that generally no more than half that height is suitable for Rockville, even within proximity of the Metro station. The maximum potential height of buildings should taper down towards the west side of the Plan Area, and be lowest in the proximity of existing residential uses.

Building height should be measured in stories rather than in feet. Regulating height by stories is more likely to result in greater variation because ceiling heights, interstitial space between floors, and roof forms will be different among buildings. There will be more incentive to design diverse roof slopes because they will not count against maximum height. Variation of building heights provides greater visual interest than rows of buildings that are all at the same elevation.

Layback slopes should be used to protect residential zones inside and outside of the Plan Area where single-unit detached, semi-detached, attached, or townhouse development exists or such development is recommended, without regard to intervening roads or other transportation facilities, including railroad and Metrorail right-of-way.

[4] See Figures 4.3 and 4.4 for the recommended typical Pike cross section and the modified east side cross section for the Middle and North Pike. Small modifications based on roadway engineering requirements will not be deemed incompatible with the plan.

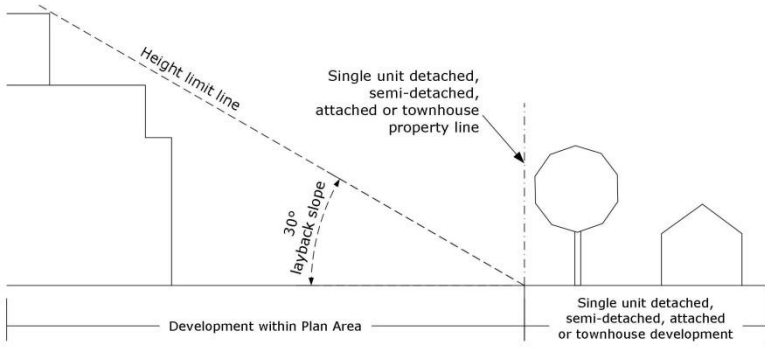


Figure 4.18: Per 25.13.05.2(d) of the City Code, a layback slope is a line beginning from the closest ground point of the lot line of any property in a residential zone measured at a 30-degree angle, within which no building can exceed in height.

In particular, a layback slope should be applied to any development fronting on the east side of the Fleet Street extension in order to protect the houses that back up to it in the Hungerford neighborhood. Layback slopes should also be applied to development on the east side of Rockville Pike in the North Pike and the Middle Pike that are located across the tracks from residences on Lewis Avenue in Twinbrook. Layback slopes would not apply to development in the South Pike.

Bonus Stories

Bonus building height of up to two stories above the base maximum for the land use designation should be allowed as a developer incentive to increase the number of affordable housing units, the amount of public open space, and the connectivity to the eastern part of the City within the Plan Area. These goals could be achieved in the following ways, with specifications for meeting them to be determined through changes to Rockville's Zoning Ordinance, as an implementation step of this plan:

Affordable housing

1. Provide a higher percentage of Moderately-Priced Dwelling Units than is already required by zoning.

   Per Chapter 13.5 of the Rockville City Code entitled "Moderately Priced Housing", new residential developments that contain 50 or more dwelling units must provide a certain percentage of the units as moderately priced dwelling units (MPDUs) that are available to households who earn between 80% and 120% of the county's median household income and that have rents that are affordable to this income range. The percentage of dwelling units that must be reserved as MPDUs varies between 12.5 and 15.0%, depending on zone and the amount by which the approved development exceeds the normal density for the zone. In the MXCD and MXTD zones in Town Center and the Rockville Pike Corridor, at least 15% of the total number of dwelling units must be MPDUs.

   A limited number of additional stories could be allowed if the percentage of provided MPDUs exceeds 15% by an amount specified in the Rockville Pike District Code. Consideration should be given to extending the current 30-year expiration of MPDUs so that units are not removed and the inventory continues to grow, since the need for affordable housing is expected to increase.

2. Provide a proportion of housing units for individuals and families whose household incomes are below the range that qualifies for MPDUs.

   Income ranges for MPDUs are determined by household size and currently range from $44,600 for one person to $68,800 for a five-person household. There is a need for dwelling units for households whose incomes are below this range. The scope of this need should be determined before this is incentive is established.

3. Provide affordable three-bedroom or larger units.

   The vast majority of multifamily dwelling units that are built, including those offered as rental and for-purchase MPDUs, are one- and two-bedroom units. There is demand for affordable three-bedroom or larger units. The scope of this need should be determined before this incentive is established.

Public Open Space

Provide dedicated parks and/or other outdoor or indoor space that are fully accessible and available to the general public, significantly beyond the minimum park dedication or fee-in-lieu requirement that are specified later in this chapter and in the Rockville Pike District Code.

Provide a crossing over the tracks

Any developer who could create a pedestrian and/or vehicular crossing over the railroad and Metro tracks, particularly in the Middle or North Pike, as part of the redevelopment of property on the east side of the Pike could be offered additional building height. While the current residential development along Lewis Avenue makes this difficult, future opportunities may allow such an east-west crossing over the railroad tracks. This would require coordination with the City, WMATA, CSX, other entities and the neighborhood.

Summary
One, or a combination, of the above provisions could be used to provide the incentive of added height. The development standards for the street frontage, as specified in the Rockville Pike District Code, determine the number of stories that could be added.

Story Heights

Ground floors, in areas where retail is allowed and envisioned, should be designed and built to accommodate retail-type uses. This approach will allow retail uses to occupy the pedestrian-level space in the future, even if the market does not yet call for that use at the time of redevelopment. It will also make buildings better able to adapt to changing market conditions and more sustainable over time. Ground floors in areas that are not envisioned to have retail uses should not be required to be designed or built for retail in terms of a minimum ceiling height.

Maximum floor-to-ceiling heights should be established for ground and upper floors in all buildings to ensure that buildings cannot be excessively tall. However, the maximum floor-to-ceiling height should be flexible enough to accommodate a wide variety of uses. Established maximum ceiling heights would be a regulatory standard. However, if a specific desired use in a specific location has a higher height requirement; it could be approved by the appropriate approving authority, at that authority's discretion.

Minimum Building Heights

A minimum building height of two stories is recommended for most of the Plan Area to encourage a vertical mix of uses and to help frame the streets. A two-story building maintains a street wall and will present a façade that is more consistent with this plan's vision than would likely be accomplished by a single-story building. Exceptions to this should be made for properties along the east side of the Middle and North Pike where highest and best use may continue to be limited to single-story buildings due to geographic and economic constraints; or for

other limited site-specific reasons. Additionally, a three-story minimum is encouraged for the South Pike Core.

Accessory buildings are allowed throughout the plan area, but their height should be limited to a single story and their locations and uses should be clearly subservient to the primary building.

4. Create smaller blocks

Since the mid-20th century, street networks in the U.S. frequently have been aligned to serve highways and high-speed traffic, resulting in declines in neighborhood connectivity and increased block sizes. [5] The Rockville Pike Corridor is an example, in that it features long blocks that restrict opportunities for pedestrian, bicycle and vehicular connectivity.

On the east side of Rockville Pike, the alignment of the Metro line parallel to the Pike has limited the number of roadway access points, resulting in an extended block length of almost 7,000 feet between Edmonston Drive and the next intersection to the south at Halpine Road.[6] Another long block (approximately 1,500 feet) occurs between the intersections of Edmonston Drive and First Street with the Pike. Woodmont Country Club and Wootton Parkway create similar situations on the west side of the Pike.

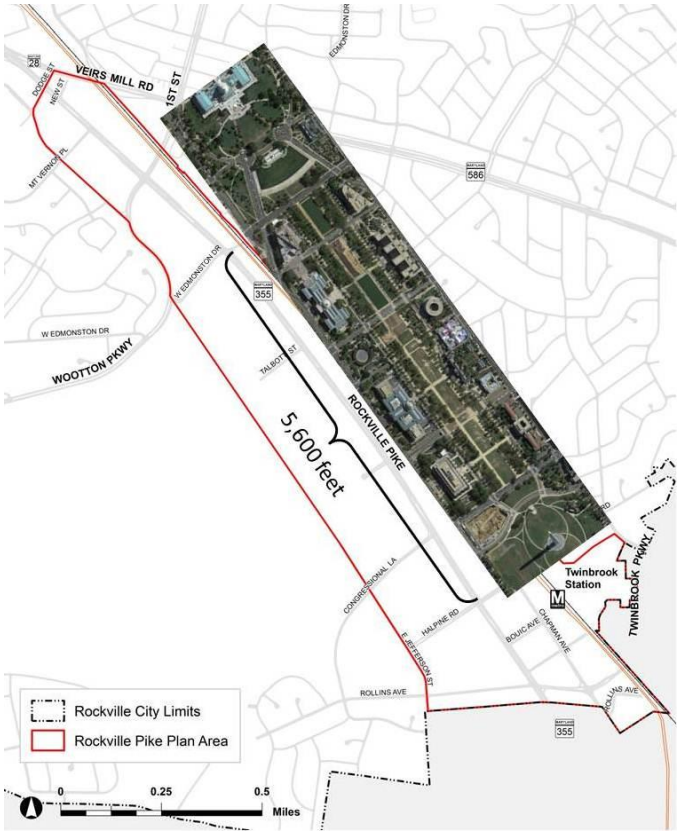


Figure 4.19: *On the east side of Rockville Pike, there is a block length of 5,600 feet between Edmonston Drive and Halpine Road, almost as long as the National Mall in Washington, DC*

[5] City blocks in older U.S. cities are typically shorter than 500 feet. Ewing, R. T. Schmid, R. Killingsworth, A. Zlot and S. Raudenbush. 2008. Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity. *American Journal of Public Health Promotion*, 18 (1): 47-57.

[6] In this case, a "block" is defined as the area between two significant street crossings of the Pike.

Long blocks discourage walking. Studies have shown that blocks that are less than 500 feet in length create better walking conditions than longer blocks and can significantly improve pedestrian connectivity. Shorter blocks allow pedestrians selection of movement.

One of the keys to making a neighborhood walkable is having a traditional grid system of streets with good connectivity throughout the neighborhood and to areas outside the neighborhood. This approach provides for shorter walking trips and allows easy and efficient pedestrian access.

Rockville's Pike: Envision a Great Place recommends reducing the size of existing blocks as part of the redevelopment process, wherever possible and practical, by creating a more developed street network than currently exists. In addition to increasing connectivity and movement choices for all travel modes, reducing block sizes produces a regular pattern of developable blocks and increased street frontage for land uses, and provides access to new development. It also increases the likelihood that a resident, employee, visitor or shopper can access multiple destinations without needing to make additional vehicular trips; they can "park once" and visit several places. Improving the pedestrian environment in this manner is a key strategy for reducing automobile trips.

Creating smaller blocks can be most readily accomplished in the South Pike and on the west side of the Middle Pike. The network can be improved by extending north-south streets such as Fleet Street in the north, Jefferson Street in the Middle Pike, and Chapman Avenue in the south, as well as extending east-west streets such as Congressional Lane from Rockville Pike eastward to Chapman Avenue and streets that connect the Pike to East Jefferson Street. (The recommended street master plan for the entire Plan Area is shown in Figure 4.9.)

The east side of the Plan Area, north of Templeton Place to Richard Montgomery Drive/Dodge Street, has limited potential for added street network because of its wedged position between the Pike and the railroad tracks. As previously noted, some of the lots in this approximately ¾-mile stretch are only about 110 feet deep. As a result, this area may not have the same potential to become as pedestrian-oriented as the South Pike or the areas west of Rockville Pike. Pleasant and safe sidewalks certainly should be provided, but some of the amenities recommended for less constricted parts of the Plan Area should be reduced or eliminated on the east side. This will ensure that there is adequate land area to accommodate viable uses and adequate unstructured parking since auto access will likely continue to be predominant here for the forseeable future.[7]

This plan encourages the creation of streets or alleys, especially when a single block or large lot is controlled by a single owner or is developed at one time, when the opportunity to incorporate street grid is most feasible. Alleys help to maintain desired connectivity and movement choices. Like the local access roads that are recommended to run parallel to the boulevard, they can also reduce the number of curb cuts on streets by providing access to multiple buildings. Alleys are encouraged to be incorporated into site plans wherever they can improve connectivity and reduce curb cuts on thoroughfares.

[7] See the discussion of the modified boulevard access road recommended for the east side of the Middle Pike in the Transportation Elements section.

To create optimal walking conditions, blocks should be no more than four acres in size and no block face should have a length greater than 500 feet without a public or private road, alley, or pedestrian pathway providing through-access to another street or alley. The perimeter of any block should not exceed 1,600 feet.

The street master plan (Figure 4.9) indicates general locations where streets are required, in keeping with these general guidelines and making some adjustments for properties that are not expected to redevelop during the timeframe of this plan. The street master plan should be implemented with the stipulation that these street locations and alignments may be adjusted based on specific development proposals and engineering considerations.

5. Provide wide, pleasant sidewalks

Figure 4.20: Existing Bicycle and Pedestrian Conditions – *Rockville Pike's pedestrian environment is limited. Pedestrians encounter narrow sidewalks, sometimes only four feet in width, and complicated intersection crossings that present challenges to disabled persons.*

A sidewalk is more than a path for getting from one point to another; it is also a place to gather, browse in shop windows, stand while waiting for a bus, eat at outdoor cafes, or rest on a bench. Just as streets perform multiple roles as public places and as transportation corridors, sidewalks perform multiple roles as well and can be destinations in and of themselves.

The sidewalk is a key component of a walkable neighborhood. The design and location of sidewalks are core elements of this plan. "Good" sidewalks include the following characteristics, especially in areas with commercial activity:

- They are continuous - with no gaps in the sidewalk network.
- They are installed on both sides of all streets.
- They are protected from moving traffic by a planting strip or street trees. (Parked cars also provide separation of pedestrians from traffic.)

- Wherever possible, they are contiguous to visually interesting features, such as shop windows.
- They incorporate "street furniture" and aesthetically appealing amenities.

The 1989 Rockville Pike Plan included some of the same recommendations that are proposed by this plan, including moving buildings forward, closer to the Pike. However, the 1989 Plan provided for Pike sidewalks that are separated from the land uses by the access drives and a landscaped setback. As a result, the continuous sidewalk as envisioned in the 1989 plan is more a feature of the Pike itself, and much less a part of a complete pedestrian environment, making it still difficult and unpleasant to walk from one site to another along the corridor.

This plan proposes that the continuous sidewalks be located immediately next to the land uses to encourage inter-site movement. Sidewalks in the Plan Area should provide sufficient space that is free and clear for walking, with enough width beneath it for containment of underground public utilities.

This "pedestrian zone" should be adjacent to an "amenity zone" that would serve as a buffer between the active pedestrian travel area and moving vehicular traffic. It should contain the utilitarian fixtures of an urban street, which, depending on the street and location, may include parking meters, signs, trash and recycling receptacles, and fire hydrants, as well as amenity features such as street trees, planting strips, street furniture such as benches, bike racks, and outdoor restaurant seating. Locating these sidewalk components together in the amenity zone keeps them from being obstacles in the clear pedestrian travel zone. This zone also protects pedestrians from splashes and serves as a snow storage area after street and sidewalk clearing.

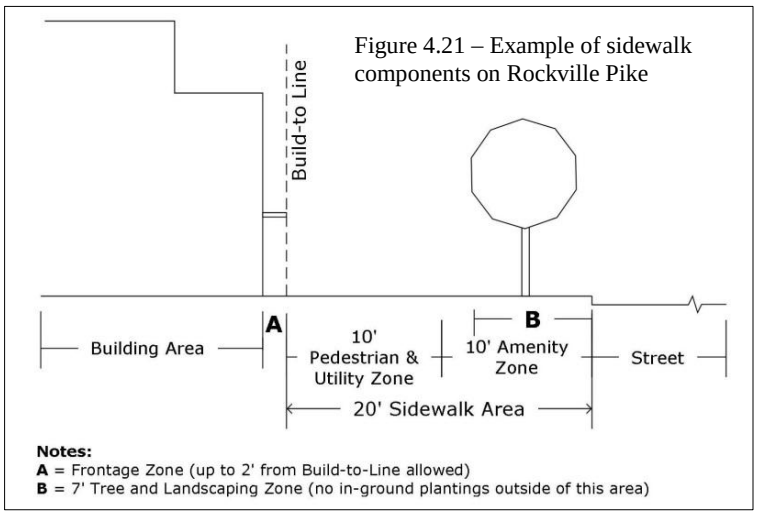


Figure 4.21 – Example of sidewalk components on Rockville Pike

The Pike is recommended to have the widest amenity zone in the Plan Area. Its wide amenity zone reflects the broad dimensions of the road and also contributes to the corridor's open space. A landscape/streetscape plan is a recommended implementation step for this plan that would provide guidance for the treatment of amenity zones by location, among other public spaces in the corridor. Undergrounding of aerial utilities is also recommended with new roads and with the redesign of Rockville Pike.

A "frontage zone" is an area adjacent to the build-to line that may be defined by a building façade, landscaping, wall or fence. This is the area where pedestrians slow down to window shop as well as enter and exit buildings. Approximately 18-24 inches is needed to allow room for doors to open, a merchandise display, or a bench against a building wall. Architectural elements that would otherwise encroach into the sidewalk, such as stoops, may occupy this zone.

A frontage zone should be provided along streets in the Plan Area. This frontage zone is in addition to the sidewalk width. All street-fronting building facades should be allowed to step back a short distance (as defined in the Rockville Pike District Zone) from the build-to line to allow for bay windows and other façade articulation, planters, stoops, stairs, etc. The location of the build-to line would not change. The percentage of building façade at the build-to line would apply to the areas within the frontage zone rather than to a set line. The frontage zone is privately owned and maintained space adjacent to the public sidewalk.

6. Enhance the pedestrian environment overall and especially at strategic intersections and on strategic streets

Intersections can serve as points of reference and as transitional areas. This plan recommends placing emphasis on the treatment of building frontages at strategic intersections: where Rockville Pike intersects with Twinbrook Parkway, Halpine Road, Edmonston Drive, Wootton Parkway, and First Street. Buildings at these corners should be chamfered (i.e., cut symmetrically at a 45-degree angle) or otherwise designed to increase the face exposure of corner buildings and to create a larger pedestrian environment (see the example below, Figure 4.22). These areas can be used for additional landscaping, open-air cafes and restaurants, and to mark entryway to shops. Distinctive architecture, artwork, clocks, flags, fountains, unique shops, and other place-making features are encouraged in these locations.

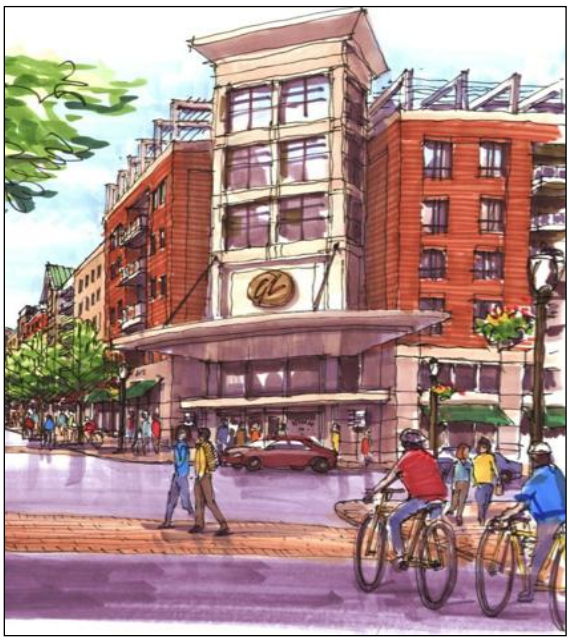


Figure 4.22: The Corner of Rockville Pike and Congressional Lane in the future *– This rendering shows the pedestrian environment created by the multi-way boulevard. It also shows how the chamfering of buildings at key intersections creates special places.*
Source: ACP

In addition, the first story of building facades along Halpine Road should be allowed (but not be required) to be recessed along the north side of Halpine, from Jefferson Street to the Twinbrook Metro Station, to create pedestrian arcades, similar to those recommended in the 1989 Rockville Pike Plan. This would allow for special pedestrian treatment along this important east-west street that provides direct pedestrian access to the Twinbrook Metro Station.

7. Allow for and support a mix of uses

Giving people a reason to walk plays a major role in determining whether people will, in fact, walk in a particular neighborhood. A mix of uses provides a compelling reason. Encouraging a mix of uses and diverse building types will enhance the pedestrian experience, encourage activity in the daytime and evening, reduce dependency on automobiles, and make walking in the corridor a more interesting and pleasant experience.

Market forces should largely determine the types of uses that emerge. A minimal regulation of uses allows developers to respond to market demand, local growth fluctuations, and changes in community preferences, and helps set the framework for economic vitality while still maintaining compatibility with surrounding land uses and building forms. Regulating the physical form of development and infrastructure in the corridor is considered more important to its success.

Uses can be mixed horizontally or vertically. This plan encourages the integration of uses whenever possible, whether in a single building, on a single site, or on a single block, in a way that creates synergy among the uses, mutually benefits each use, and begins to create vibrant urban neighborhoods along the corridor.

Most non-industrial uses can be accommodated within the Plan Area. Recommendations on particular use types follow:

- This plan recommends that residential uses, other than single-unit detached houses, may be located anywhere; but residential units on the ground floor should not front the most pedestrian-oriented streets. (Residential lobbies and other common areas could front these streets, however.) This caveat helps to ensure that uses actually fronting the Pike and other retail-oriented streets encourage pedestrian activity.

- Office uses should be allowed everywhere, but services that are more retail in nature, in that they generate a high level of pedestrian activity (such as a bank), should be directed to the retail-oriented portions of the Plan Area.

- Retail and some service, recreation, education, and public assembly uses should be prohibited in areas that are identified as primarily residential (General and Neighborhood areas, as identified on the land use map) or adjacent to existing residential uses, but allowed in other areas.

- Automobile service stations should be allowed to continue in current locations, but stations should be discouraged in new locations within the Plan Area.

Because many lots on the east side of the Middle Pike and North Pike have limited redevelopment potential, single uses should be allowed, though a mix is preferred. It is anticipated that uses on these sites will continue to be accessed primarily by automobiles, since transit accessibility is limited, and the potential for robust pedestrian activity is not as strong as in the South Pike. If a

high-capacity transit station were to be located in the Middle Pike, however, the automobile orientation of this section of the corridor could change to a more multi-modal environment.

Certain uses, such as liquor sales, drive-through facilities, and commercial parking facilities, may be identified as conditional uses that may be allowed but should be subject to more discretionary review than permitted uses because of their potential impacts. Performance standards also may be applied as needed to ensure that allowed uses do not create a nuisance for neighboring properties.

The mixing of uses and diverse building types, along with streetscapes that are uninterrupted by parking lots and numerous curb cuts, will dramatically enhance the pedestrian experience and make walking, bicycling, and window-shopping more pleasant experiences.

8. Encourage enduring, human-scale architecture that has visual interest

A building's façade serves as the interface between public and private spaces and, thereby, contributes to the pedestrian experience.

"Enduring" refers both to a building's ability to adapt to different uses over time and for its architecture to transcend trends. This goal can best be achieved by incorporating the ability to change uses, should the market change over time, through a building's sustainable design. This design consideration makes it less likely that a building will become vacant or be demolished if its use becomes obsolete or out of sync with market conditions. For example, the ground floor of buildings in most frontages should be built with ceilings that are high enough to accommodate retail uses, even if the ground floor is not initially occupied by a retail tenant. Retailers generally prefer to be on the ground floor of buildings, so such a requirement reserves that ability.

This plan does not mandate a particular architectural style but, rather, encourages massing and building forms that are visually interesting, contribute to energy on the street, help to establish an environment that encourages and facilitates pedestrian activity, and incorporate human scale detailing. Frequently spaced doors and windows at eye level, expression lines, and other façade articulation are examples of design features that serve all of these objectives.

Design guidelines should be considered to encourage human-scale massing and fenestration, and design elements to soften the impacts of massing and blank walls, without imposing too much rigidity or specificity that could produce an overly homogenous "themed" appearance for the corridor. Consideration should be given to developing coherence in other ways, i.e. sidewalks, street trees, artwork, wayfinding signage, etc. through a streetscape plan.

There are few buildings on today's Rockville Pike that offer enduring architecture. As noted in Appendix B, History of the Rockville Pike Corridor, most of the existing buildings were built after World War II as single-story strip commercial centers or single-use retail buildings. Some well-designed or notable buildings are located within the Plan Area; however, there are no sites that have been designated for preservation. Any building or site that may be significant would require further evaluation to determine its level of significance and whether it is eligible for designation under local or National Trust for Historic Preservation criteria. After plan adoption,

the City should consider allocating sufficient resources to analyze which buildings, if any, qualify for historic designation.

9. Provide parks and public open space

Currently, there are no parks and there is very little public open space in the Plan Area. This plan establishes a goal of creating new public spaces.

The need for parks and open space will grow as redevelopment occurs and the number of people living and working in the Rockville Pike corridor increases. Regional projections show that almost 9,000 new residents can be expected to be living in the Plan Area by 2040[8] and almost all new residential development will be multifamily. In addition, almost 4,500 new employees will be working in the corridor. New residential units will be predominantly in mid-rise buildings, with some potential for attached single-family housing (townhouses) as well. According to the section on recreational land and open space in the Municipal Growth Element (MGE) of Rockville's Comprehensive Master Plan, adopted by the Mayor and Council in December 2010, "The most pressing [open space] need in the context of mixed-use redevelopment is expected to be ensuring the availability of open space within walking distance of multifamily homes."[9]

Figure 4.23: Fountain at the Rockville Town Square Plaza
Source: City of Rockville

Like other urbanizing areas, the Rockville Pike corridor must balance redevelopment with open and green space for recreation, visual amenities, and environmental quality. Creating parks has long-term benefits that are extremely important but sometimes more difficult to quantify than the returns from development. Community centers and other such recreational facilities will likely be needed within and outside of the Plan Area to accommodate the corridor's future population growth.

Residents create the greatest demand for parks and open space. Just over 40% of the City's population growth is projected to occur in the Rockville Pike Plan Area over the next few decades

[8] Metropolitan Washington Council of Governments (MWCOG) Round 8.2 projections
[9] Municipal Growth Element of the Comprehensive Master Plan, adopted December 13, 2010, p. 52. http://www.rockvillemd.gov/masterplan/elements/MunicipalGrowth121310.pdf.

and there will be substantial demand there for parks and open space. This is especially true given the fact that there are no parks now and few nearby.

New parks and open space in the Plan Area also can be expected to draw from the wider City population and existing and future residents of the surrounding county. Some parks in the vicinity, such as Montrose Park just west of the southern end of the Plan Area, are already often used to capacity. At the same time, Rockville's parks outside of the Plan Area and resources beyond the City limits will also provide some of the amenities demanded by new residents of the corridor.

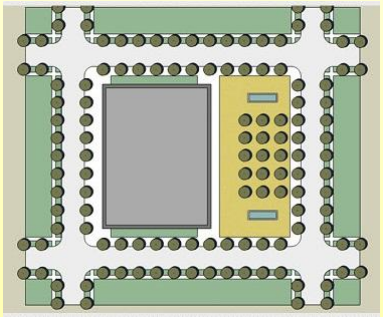
A goal of Rockville's Department of Recreation and Parks is to have a park within ten minutes walking distance of any point in the City.[10] This plan recommends that parkland be located within a ten-minute walk from any residence within the Plan Area. A ten-minute walk equates to roughly one-quarter to one-half mile distance, acknowledging that this varies for different individuals.

A goal of this plan is for there to be at least one park on each side of the Pike in the South, one on the west side of the Middle, and, possibly, one on the west side of the North. Small, publicly accessible open spaces that are not necessarily dedicated to the City could augment, but not replace, dedicated parkland. Parkland should be well-distributed throughout the corridor to provide a wide range of functions, including recreational facilities (such as a skate park, playgrounds, and other facilities), neighborhood parks, a dog park, a community garden, and other open spaces that would serve a diverse community. [11]

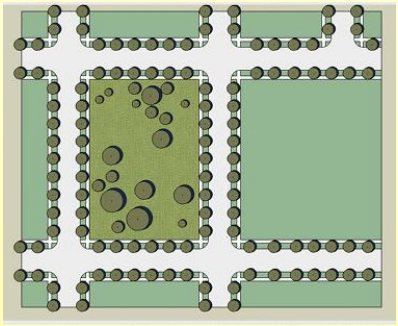
A minimum of ten acres of parkland is the goal for the entire corridor. The minimum acceptable size for a park to count toward this goal is 3/10 acre, and some may be primarily hard-scape. (Pervious materials should be used for hardscape elements whenever feasible.) Plazas, greens, and squares are types of open space that fit well into an urban area and that typically range between 1/3 and 2 acres. (As an example, Rockville Town Square's plaza is one-half acre). Rockville should remain receptive to new and creative approaches to providing urban open spaces. Green roofs and privately provided open space and recreational amenities are encouraged, especially for residential buildings, but do not substitute for public parks.

[10] Rockville Parks, Recreation and Open Space Plan, September 2009, p. 4-22
[11] Rockville Parks, Recreation and Open Space (PROS) Plan identifies specific facility needs on pp. 4.26-4.31.

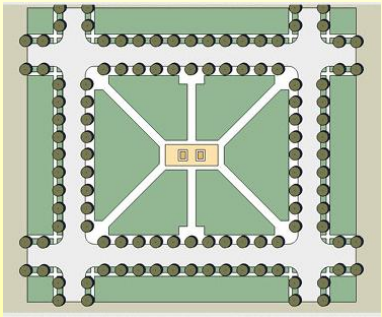
Figure 4.24: Urban Parks and Open Space Types



A **Plaza** is a formal open space that is available for civic and commercial uses and is spatially defined by building frontages. Landscaping may consist of pavement, trees and shrubs.



A **Green** is an open space that consists of lawn and informally arranged trees and shrubs. Greens are spatially defined by abutting streets and are typically furnished with paths, benches and open shelters.



A **Square** is a formal open space available for recreational and civic uses and spatially defined by abutting streets and building frontages. Landscaping often consists of a lawn, trees, and shrubs planted in formal patterns. Furnishings typically include paths, benches and open shelters. Urban squares consist of pavement, with or without landscaping.

Parks that serve active recreational functions need to be larger. The City should seek the creation of a regional park in the context of any development that may be proposed in the future on the Woodmont Country Club property.

Rockville Pike as Public Space

The "complete street" multi-way boulevard itself will provide public open space in the Plan Area by providing broad continuous sidewalks, bikeways that connect to the City's trail system, and trees and landscaping along the medians. "Greening" the Pike would improve the pedestrian and biking experience as well as make it more visually distinctive and environmentally friendly. A streetscape plan will be needed to implement this recommendation.

10. De-emphasize parking

This plan locates, wherever possible, parking in structures behind or under buildings, thereby minimizing inactive zones and reducing the visually unappealing effect of large surface lots in front of buildings. Structured parking also reduces the amount of impervious surface relative to the number of cars and provides more street-front opportunities for stores and businesses. There should be a minimum parking setback on street-facing facades so that parking garages do not dominate sidewalk areas and are not visually prominent. Parking drives should be discouraged in active pedestrian-oriented areas where there are alternative options.

Some on-street, "teaser", parking should be provided on the boulevard's access roads and on all other streets in the plan area. This type of parking serves multiple functions beyond providing convenience to drivers and benefits to adjacent retailers. On-street parking slows traffic and actually becomes part of the pedestrian realm. Drivers tend to travel at slower speeds in the presence of on-street parking and parked cars provide a buffer, both of which help to create a safer pedestrian environment.

Recent thinking, especially in urbanizing suburban areas, has provided a new perspective on parking and reducing dependence on automobiles. Traditional suburban parking standards, often based on generic formulas that are geared toward satisfying highest demand, have been criticized for contributing to sprawl. Providing too much parking consumes land and resources, encourages automobile use over other transportation choices, increases the cost of development, and creates disincentives with respect to sustainability. Mixed-use compact development and improvements to pedestrian, bike, and transit service can significantly decrease the demand for parking.

This change in thinking resulted in establishing maximum standards, in addition to minimums, in the mixed use zones in the Rockville Pike corridor in the City's 2009 zoning ordinance in order to limit the amount of parking that can be built. This plan endorses that concept and recommends that a range of parking be *required* (to be represented by a minimum standard) and *allowed* (to be represented by a maximum standard) for all sites in the Plan Area. The range should vary depending on land use designation, distance and accessibility to the Metro station and other transit. Parking requirements for residential uses should vary depending on unit size (number of bedrooms).

Providing a range of parking requirements allows the Plan Area to evolve with the market and acknowledges that developments that are built before the infrastructure becomes pedestrian-friendly may need more parking than those that come later. It is anticipated that the high end of the ranges (providing for more parking spaces) will be utilized more in the early years of plan implementation because the factors that reduce parking demand will take time to evolve. The maximum parking requirements are founded on the concept that the corridor will become significantly less autocentric and more urban and multi-modal over time and will, therefore, require significantly less parking.

Sites in the Middle and North Pike, on the east side of Rockville Pike, may not have the land needed to build parking structures and, therefore, may depend on surface lots for most of their parking needs into the future. These sites may also need to provide the high end of the range of parking longer into the future than areas in the South Pike that are close to the Metro station and that will likely transition to a multi-modal environment more quickly. Implementation of a rapid transit line along the Pike could alter this dynamic.

CONCLUSION

The transportation and land use policies discussed in this chapter become reality when they are implemented. The action steps needed for implementation are provided in Chapter 5.